

Work Order ID 65764

Thursday, January 27, 2011 8:35:34 AM

Page 1

Item ID: D212-664-101TRN

Accept

Setup Start

Revision ID:

Item Name: Crosstube Turning Detail

Stop

Start Date: 1/25/2011 Start Qty: 1.00

Cust Item ID:

Required Date: 1/31/2011 Req'd Qty: 1.00

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D212-664-141

Rev D

130

QC1- Inspect dimensions to dimension sheet

0.00

QC

Quality Control

Memo

MAKE NEW FAI SHEET FOR TUBE
THAT HAS MISSING W/O
RAW MAT'L TAKEN WAS
D6005-128 B57911

0.00

8 w/o 1/22

140

QC8- Inspect parts - second check

0.00

only 11/01/27

QC

Quality Control

Memo

0.00

150

Crosstubes Chemical Conversion

0.00

HandFXtube

Hand Finishing Crosstubes

Memo

0.00

DP

11-2-2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 65764

Thursday, January 27, 2011 8:35:34 AM

Page 2

Item ID: D212-664-101TRN

Accept

Setup Start

Revision ID:

Item Name: Crosstube Turning Detail

Stop

Start Date: 1/25/2011 Start Qty: 1.00

Cust Item ID:

Required Date: 1/31/2011 Req'd Qty: 1.00

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC3- Inspect Part Finish	0.00							
QC Quality Control	Memo	0.00							1 0 BE 1/27/11
170	Packaging	0.00							
Packaging Packaging	Memo Identify and Stock in kanban rack Location: 46	0.00							DP 11-2-30
180	QC21- Final Inspection - Work Order Release	0.00							
QC Quality Control	Memo	0.00							11/02/07 JJ

U. K. N. A. I.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Thursday, January 27, 2011 8:35:32 AM

Page 1

Work Order ID: 65764

Parent Item: D212-664-101TRN

Parent Item Name: Crosstube Turning Detail

Start Date: 1/25/2011

Required Date: 1/31/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A 08-03-06 new issue DD verified by:ec
IPP Rev B 08.04.02 removed Polish EC verified by: DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6005-128		Manufactured	No			120	Each	28.0000	1	1			

Crosstube Material

Location

LG

Loc Qty

28

4

24

Loc Code

53593

57911

24 *see pg 1 - 11.01.31*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	65764
Description: Crosstube Assembly (205/212/412 High Fwd)	Part Number:	D212-664-141
Inspection Dwg: D212-664-141 Rev: D		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

	Inspection Sheet Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
SIDE A	0.200	+/-0.010				Vern	
	R0.063	+/-0.010	R.063			Rad-gage Vern	REF
	2.740	+0.005/-0.000					
	5.097	+/-0.030					
	2.304	+0.005/-0.000					
	2.340	+0.005/-0.000					
	2.398	+0.005/-0.000					
	2.448	+0.005/-0.000					
	2.498	+0.005/-0.000					
	2.549	+0.005/-0.000					
	2.599	+0.005/-0.000					
	2.671	+0.005/-0.000					
	2.701	+0.005/-0.000					
SIDE B	0.200	+/-0.010				Vern	
	R0.063	+/-0.010	R.063			Rad-gage Vern	REF
	2.740	+0.005/-0.000					
	5.097	+/-0.030					
	2.304	+0.005/-0.000					
	2.340	+0.005/-0.000					
	2.398	+0.005/-0.000					
	2.448	+0.005/-0.000					
	2.498	+0.005/-0.000					
	2.549	+0.005/-0.000					
	2.599	+0.005/-0.000					
	2.671	+0.005/-0.000					
	2.701	+0.005/-0.000					
	126.514	+/-0.020	126.536				

Measured by:		Audited by:		Prototype Approval:	N/A
Date:		Date:		Date:	N/A

Rev	Date	Change	Revised by	Approved
A	05.04.27	New Issue (P/O D412-664-101)	KJ/JLM	
B	06.03.15	Tolerance revised for 5.097 per Dwg Rev update	KJ/JLM	
C	07.05.28	Dwg Rev updated	KJ/JLM	
D	10.02.02	Dimension 126.514 was 126.51	KJ	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Transaction Type	Item ID/ Item Name	Warehouse Location ID	Reason	Employee ID Location Code	Loc Trans Date	LocQtyPrior/ Location Qty	Lot Number	LotQtyPrior/ Lot Qty	Shelf Life Date Lot Code	Extended Cost
Issue	D6005-128 / Crosstube Material	Main Warehouse LG	61854	FAUT01	9/15/10	42.0000		8.0000		
		Main Warehouse LG	62194	GOLD01	9/28/10	-1.0000	53593	-1.0000		-\$454.89
		Main Warehouse LG	62167	GOLD01	9/28/10	-1.0000	53593	-1.0000		-\$454.89
		Main Warehouse LG	62193	FAUT01	9/28/10	-1.0000	53593	-1.0000		-\$454.89
		Main Warehouse LG			12/08/10	-1.0000	53593	-1.0000		-\$454.89
								-28.0000		-\$12,736.93
	D6005-128P / Crosstube material	Main Warehouse MAT	53593	FAUT01	1/19/10	-6.0000	53593	-6.0000		-\$2,727.05
		Main Warehouse MAT	53593	FAUT01	2/08/10	-25.0000	53593	-25.0000		-\$11,362.72
								-31.0000		-\$14,089.77

65764

List Lots

January 24, 2011 1:01:45 PM

Page 1 of 1

Criteria : Item ID: d6005-128 All Locations All Warehouses All Quantity

Item ID Item Name	Warehouse ID Location ID	Lot Number	Last Trans Date	Lot Qty	Shelf Life Dt	Type Code	Comments
D6005-128	Main Warehouse	53593	12/08/10	4.0000	(3)	QC21	7
Crosstube Material	LG						
	Main Warehouse	57911	1/21/11	24.0000	(21)	QC21	34
	LG						
Total:				28.0000			

41
2
29

April - Sept

Work Order ID 62166

Monday, September 20, 2010 10:12:54 AM

Page 1

Item ID: D212-664-101TRN

Accept

Setup Start

Revision ID:

Item Name: Crosstube Turning Detail

Stop

Start Date: 9/20/2010 Start Qty: 1.00

Cust Item ID:

Required Date: 9/30/2010 Req'd Qty: 1.00

Customer:

Reference:

Approvals:

Process Plan:

Date: 10/9/07

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D212-664-141

Rev D

100

0.00



Mori Seiki

MORI SEIKI CNC LATHE LARGE

Memo

0.00

Mori Seiki CNC Lathe Large

1-Fill tube with sand & install plugs DT8534 on both ends as per Folio FA113
2-Turn first side as per Folio FA113
3-File down transition lines smooth.

110

0.00



QC

QC1- Inspect dimensions to dimension sheet

Memo

0.00

Quality Control

120

0.00



Mori Seiki

MORI SEIKI CNC LATHE LARGE

Memo

0.00

Mori Seiki CNC Lathe Large

1-Turn second side as per Folio FA113
2-File down transition lines smooth.
3-Remove sand and plugs

Work Order ID 62166

Monday, September 20, 2010 10:12:54 AM

Page 2

Item ID: D212-664-101TRN

Accept

Setup Start

Revision ID:

Stop

Item Name: Crosstube Turning Detail

Start Date: 9/20/2010 Start Qty: 1.00

Cust Item ID:

Required Date: 9/30/2010 Req'd Qty: 1.00

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

QC1- Inspect dimensions to dimension sheet

0.00



QC

Memo

0.00

Quality Control

140

QC8- Inspect parts - second check

0.00



QC

Memo

0.00

Quality Control

150

Crosstubes Chemical Conversion

0.00



HandFXtube

Memo

0.00

Hand Finishing Crosstubes

Work Order ID 62166

Monday, September 20, 2010 10:12:54 AM

Page 3

Item ID: D212-664-101TRN

Accept

Revision ID:

Item Name: Crosstube Turning Detail

Start Date: 9/20/2010 Start Qty: 1.00

Required Date: 9/30/2010 Req'd Qty: 1.00

Reference:

Cust Item ID:

Customer:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursTool ID Tool # Plan Accept Reject Reject Insp.
Code Qty Qty Number Stamp

160

QC3- Inspect Part Finish

0.00

DP

10-11-15



QC

Memo

0.00

Quality Control

170

Packaging

0.00



Packaging

Memo

0.00

Packaging

Identify and Stock in Kanban rack
Location: 4-tubes

DP

10-11-15

①

180

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

CK - 10/11/10 MF

10-11-15

Picklist Print

Monday, September 20, 2010 10:15:00 AM

Page 1

Work Order ID: 62166

Parent Item: D212-664-101TRN

Parent Item Name: Crosstube Turning Detail


Start Date: 9/20/2010

Required Date: 9/30/2010

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A 08-03-06 new issue DD verified by:ec
IPP Rev B 08.04.02 removed Polish EC verified by: DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6005-128  Crosstube Material		Manufactured	No			120	Each	41.0000	1	1			

Location

Loc Qty

Loc Code

LG

41

53593

7

57911

34

1 - 10/10/07

Item ID Item Name	Revision Level	Product Family	Emp. ID	First Name Last Name	Work Order ID	Route Seq ID	Labor Date	Actual Setup Hrs	Setup Hours	Setup Amount	Actual Lab Hrs	Labor Hours	Labor Amount	Nbr Of WOs	
D212-664-101TRN Crosstube Turning Detail		CROSST UBES	MYRE	Alexandre Myre	61855	100	9/14/10	0	0	\$0.00	\$1.85	1.8489	\$32.82	1	
						62166	100	9/20/10	0	0	\$0.00	\$0.50	0.5	\$8.88	1
						62166	100	9/20/10	0.21835	0.4367	\$3.88	\$0.00	0	\$0.00	2
						62166	100	9/21/10	0	0	\$0.00	\$0.00	0.0025	\$0.04	1
						62167	100	9/20/10	0	0	\$0.00	\$0.47	0.4744	\$8.42	1
						62167	100	9/20/10	0.2161	0.4322	\$3.84	\$0.00	0	\$0.00	2
						62167	100	9/21/10	0	0	\$0.00	\$3.11	3.1083	\$55.17	1
						62167	100	9/21/10	0	0	\$0.00	\$0.89	0.8931	\$15.85	1
						62167	100	9/21/10	0	0	\$0.00	\$2.58	2.5767	\$45.74	1
						62193	100	9/21/10	0	0	\$0.00	\$0.39	0.3911	\$6.94	1
						62193	100	9/22/10	0	0	\$0.00	\$1.32	2.6428	\$23.45	2
						62194	100	9/21/10	0	0	\$0.00	\$0.32	0.3156	\$5.60	1
						62194	100	9/22/10	0	0	\$0.00	\$1.32	2.64	\$23.43	2

D212-664-101

2 tubes
1st Alex

DART AEROSPACE LTD		Work Order: 65764
Description: Crosstube Assembly (205/212/412 High Fwd)		Part Number: D212-664-141
Inspection Dwg: D212-664-141 Rev: D		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Inspection Sheet Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
SIDE A	0.200	+/-0.010	2.00		HB-02 vern	
	R0.063	+/-0.010	R0.063		LG	
	2.740	+0.005/-0.000	2.742/2.741		HB-02 vern	
	5.097	+/-0.030	5.100			
	2.304	+0.005/-0.000	2.306			
	2.340	+0.005/-0.000	2.343			
	2.398	+0.005/-0.000	2.403			
	2.448	+0.005/-0.000	2.455			
	2.498	+0.005/-0.000	2.504			
	2.549	+0.005/-0.000	2.555			
	2.599	+0.005/-0.000	2.605			
	2.671	+0.005/-0.000	2.679			
	2.701	+0.005/-0.000	2.707			
SIDE B	0.200	+/-0.010	2.00		HB-02 vern	
	R0.063	+/-0.010	R0.063		LG	
	2.740	+0.005/-0.000	2.745/2.744		HB-02 vern	
	5.097	+/-0.030	5.100			
	2.304	+0.005/-0.000	2.307			
	2.340	+0.005/-0.000	2.344			
	2.398	+0.005/-0.000	2.402			
	2.448	+0.005/-0.000	2.453			
	2.498	+0.005/-0.000	2.504			
	2.549	+0.005/-0.000	2.557			
	2.599	+0.005/-0.000	2.606			
	2.671	+0.005/-0.000	2.681			
	2.701	+0.005/-0.000	2.715			
	126.514	+/-0.020	126.500		EP-11 TM	

Measured by: S	Audited by: [Signature]	Prototype Approval: N/A
Date: 10/12/09	Date: 11/01/26	Date: N/A

Rev	Date	Change	Revised by	Approved
A	05.04.27	New Issue (P/O D412-664-101)	KJ/JLM	
B	06.03.15	Tolerance revised for 5.097 per Dwg Rev update	KJ/JLM	
C	07.05.28	Dwg Rev updated	KJ/JLM	
D	10.02.02	Dimension 126.514 was 126.51	KJ [Signature]	[Signature]



Item	Qty -141	Qty -141B	Part Number	Description
1	X		D212-664-141	CROSSTUBE ASSEMBLY (205/212/412 HIGH FWD)
2		X	D212-664-141B	CROSSTUBE ASSEMBLY (214 HIGH FWD)
3	1	1	D6005-128	CROSSTUBE
4	2	2	D2893-1	SUPPORT
5	4	4	D3595-063-450	RUBBER CUSHION
6	4	4	MS21920-25	CLAMP (OR MS21920-26)
7	A/R	A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE)

GENERAL NOTES:

- 1) MATERIAL: MANUFACTURED FROM D6005-128
FINISHED LENGTH = 126.514±0.020
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: SCRIBE DART PART NUMBER "D212-664-XXX" AND BATCH NUMBER ON INSIDE OF CUFF
USING VIBRATING STYLUS
- 7) WEIGHT: D212-664-141 = 33.6 lbs (PER IIN-D212-664)
D212-664-141B = 33.6 lbs (PER IIN-D212-664)
- 8) PART IS SYMMETRIC ABOUT CENTERLINE.
- 9) RUN CUTTER OFF PART. BLEND OUT EDGE LONGITUDINALLY. TRANSITION SHOULD BE SMOOTH.
- 10) BEND PROGRESSIVELY WITH A MINIMUM OF 3 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 11) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 12) INSTALL D2893-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 TO THE SURFACE OF D2893-1 THAT WILL BE IN CONTACT WITH THE CROSSTUBE PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 13) INSTALL MS21920-25 CLAMPS (OR -26) WITH D3595-063-450 RUBBER CUSHIONS TO SECURE THE D2893-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMPS ARE OPPOSITE OF CROSSTUBE SUPPORT.
- 14) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

RELEASED
2009-10-29
MTH

D	REFORMAT/REVISE GENERAL NOTES/PART LIST; REORGANIZED VIEWS AND REFORMATTED DRAWING TO CURRENT STANDARDS; ADD: -141B (ZN B4-2, D4-2); REMOVED REF & ADD TOLERANCES (ZN B4-3, C6-3, C8-3 & B6-3); RELOCATED FLAG #6 PER PAR 08-046 (ZN A5-3); MOVED TURNING DETAIL & UPDATED TOLERANCE TO SHEET 4	RF	09.09.30
C	REMOVE -851 ABRASION STRIP; ADD MAGNOBOND 6398, CUSHION, REVERSE CLAMPS	PH	07.03.08
B	ADD HOLES FOR COMPATABILITY WITH BHT/AA SKIDTUBES	PH	05.02.04
A	NEW ISSUE	PH	00.12.12
REV.	DESCRIPTION	BY	DATE
DESIGN	PH	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	PH	DRAWING NO.	REV. D
MFG. APPR.	PH	D212-664-141	SHEET 1 OF 4
APPROVED	PH	TITLE	SCALE
DE APPR.	PH	XTUBE ASSY (205/212/412 HI FWD)	NTS
DATE	09.09.30	COPYRIGHT © 2000 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

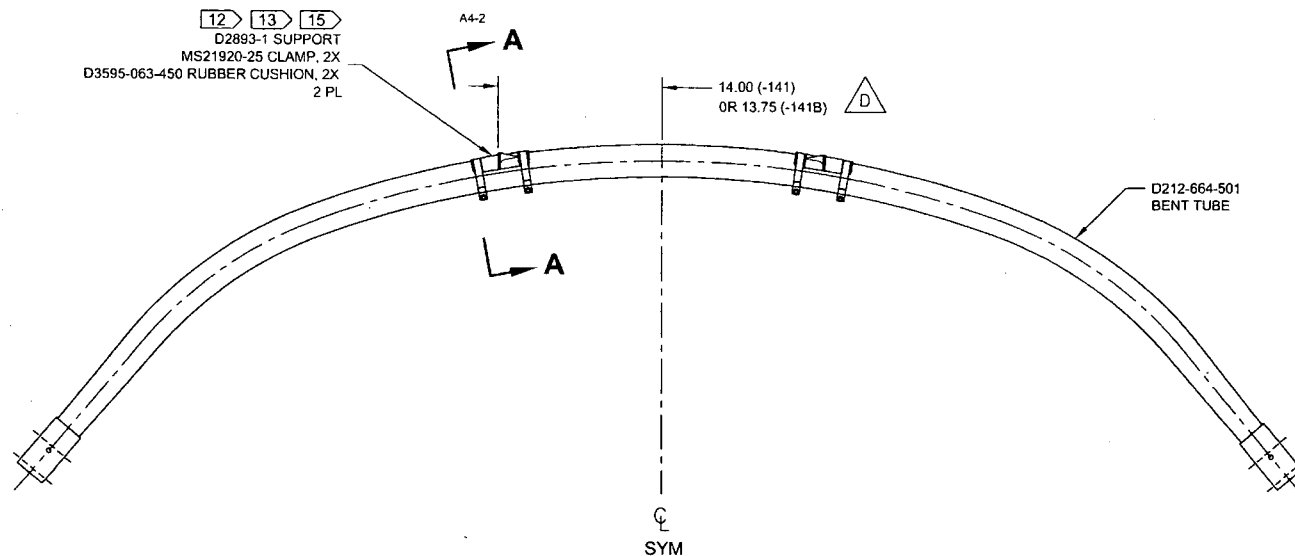
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

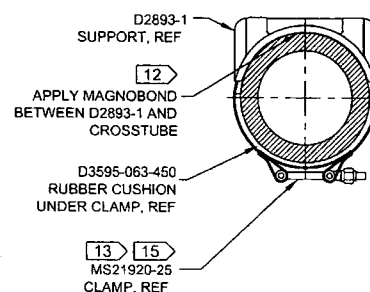
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D212-664-141/-141B
ASSEMBLY DETAIL $\triangle D$



SECTION A-A D5-2
SCALE 4X

RELEASED
2009-10-29

DESIGN	PH	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	QP	DRAWING NO.	REV. D
MFG. APPR.	DS	D212-664-141	SHEET 2 OF 4
APPROVED	160	TITLE	SCALE
DE APPR.	160	XTUBE ASS'Y (205/212/412 HI FWD)	NTS
DATE	09.09.30	<small>COPYRIGHT © 2000 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

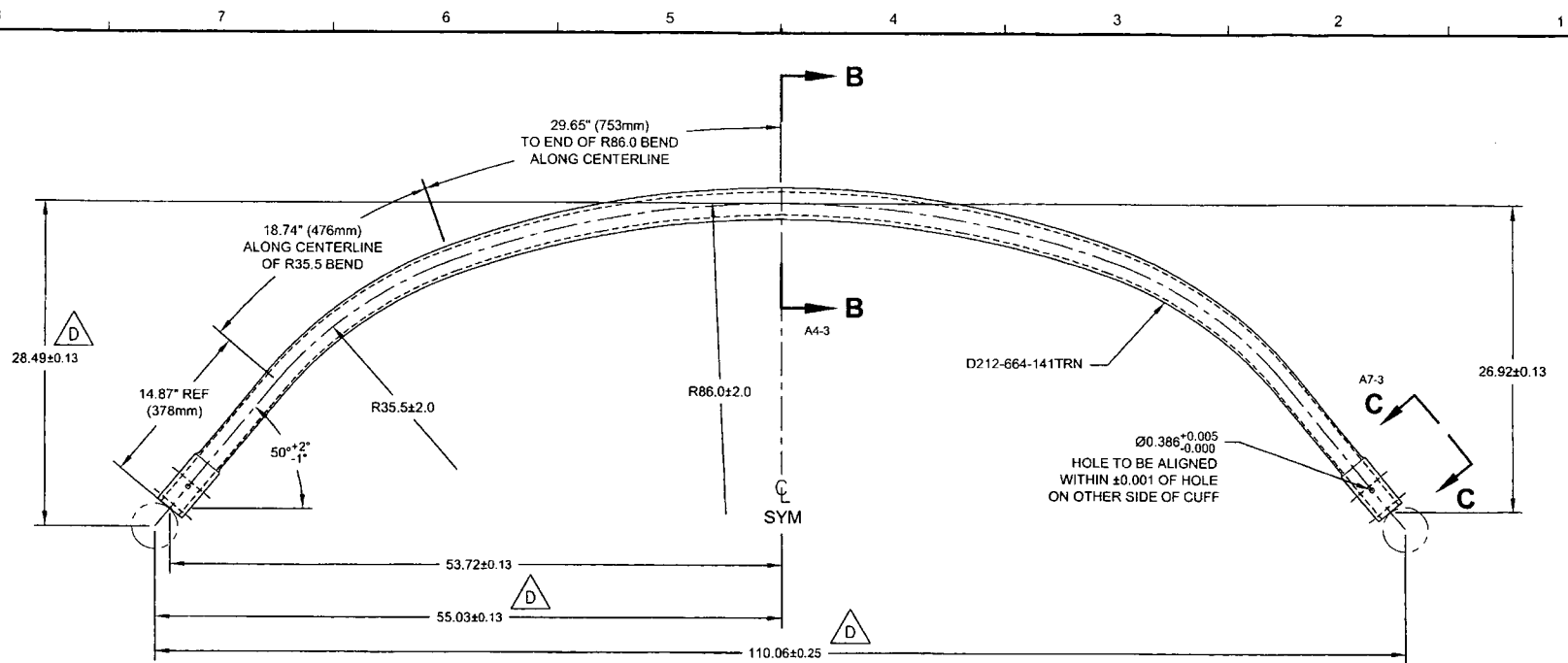
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

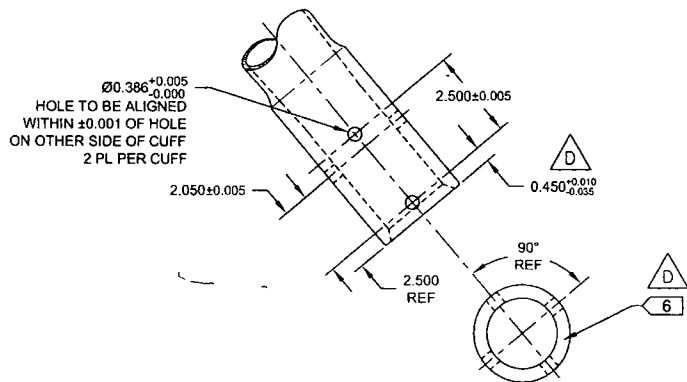
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

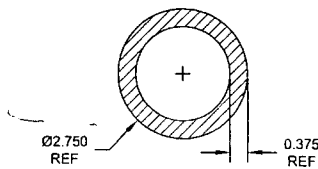
NOTE: Date & initial all entries



D212-664-501
BENDING AND DRILLING DETAIL 10 D



VIEW C-C: CUFF DETAIL C2-3
 SCALE 3X



SECTION B-B C4-3
 SCALE 4X

65764

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 2009-10-29

DESIGN	PH	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
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MFG. APPR.	DS	D212-664-141	SHEET 3 OF 4
APPROVED	AP	TITLE	SCALE
DE APPR.	TH	XTUBE ASS'Y (205/212/412 HI FWD)	NTS
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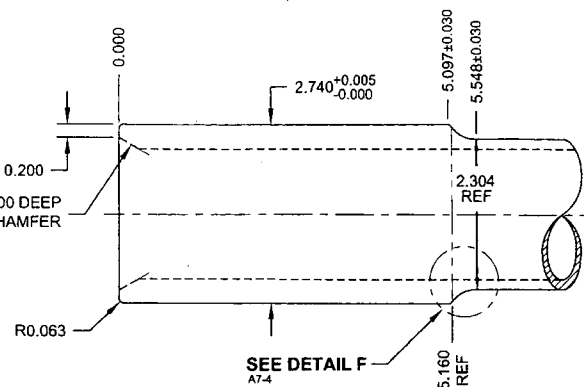
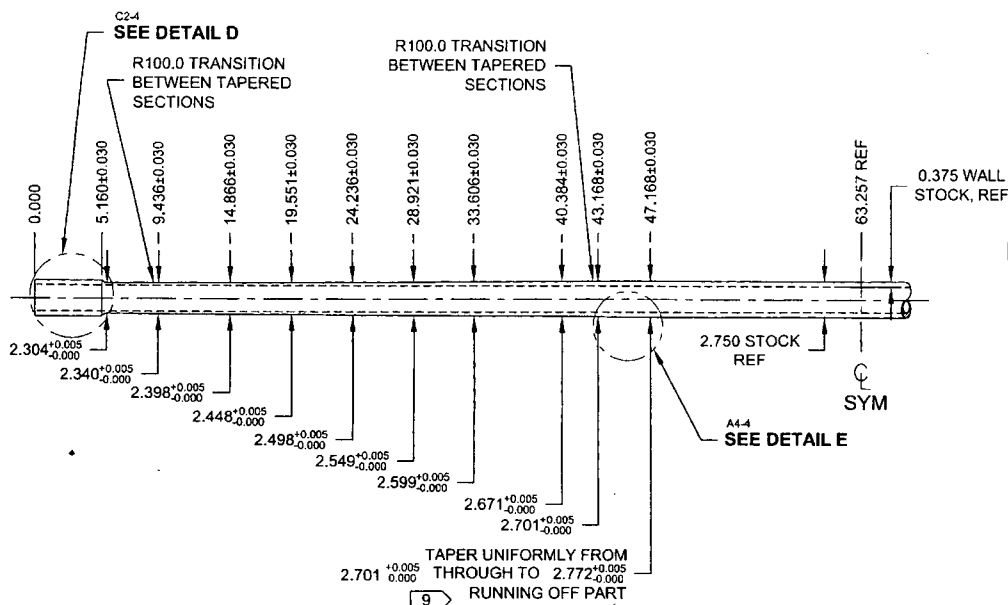
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

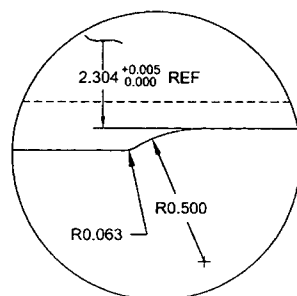
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

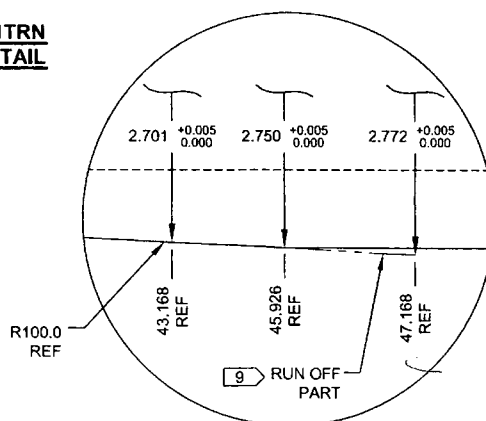
NOTE: Date & initial all entries



DETAIL D:
CROSSTUBE CUFF D8-4
SCALE 5X



DETAIL F:
CUFF TRANSITION C2-4
SCALE 10X



DETAIL E:
TAPER RUN-OFF C5-4
NOT TO SCALE

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APPROVED	AP	TITLE	SCALE
DE APPR.	AP	XTUBE ASS'Y (205/212/412 HI FWD)	NTS
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D212-664-101 ^{TRN} PAR #: _____ Fault Category: K-tube NCR: Yes ☐ No ☒ DQA: 7 Date: 11/02/07

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR: <u>657164</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
10.12.08	130	Tube O.D. over tolerance in several locations by 0.001 - 0.003" At cuff by 0.009" R.C. process	CP 10.12.08 DS/042	Acceptable	N/A	S 11/02/07	CP 10.12.08 DS/042	S 11/02/07

NOTE: Date & initial all entries